

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application

Confirmation No.6749

Inventor(s) Nikolaos Berntenis, et. al.

Group:

Application No. 10/567,386  
(Case Docket No. 21796)

Examiner:

For: RA ANTIGENIC PEPTIDES

**RESPONSE TO NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C.  
371 AND PRELIMINARY AMENDMENT**

Nutley, New Jersey 07110  
April 1, 2008

Mail Stop: Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

This Response and Preliminary Amendment is filed in Response to the Notification of Missing Requirements under 35 USC 371 mailed February 25, 2008. This Response and Preliminary Amendment is timely filed.

This Preliminary Amendment supplements the Preliminary Amendment filed on February 7, 2006. In the originally filed Preliminary Amendment of February 7, 2006, claims 1-16, 18, 23, 25 and 28 were amended, claims 19-22, 24, 26-27 and 29 were canceled, and claims 30 and 31 were added. Claims 1-16, 18, 23, 25, 28 and 30-31 thus stand pending.

Please kindly amend claims 2-13, 17, 18, 23 and 25. Please cancel claims 16, 28 and 30. The claims as amended are set forth on pages 2 – 6 of this paper.

**In the Claims:**

1. (Previously amended) A MHC class II antigenic peptide comprising
  - (a) the amino acid sequence of the peptide binding motif selected from the group consisting of SEQ ID NOs. 49 to 57 and SEQ ID NOs. 103 to 122, or
  - (b) the amino acid sequence of the peptide binding motif selected from the group consisting of SEQ ID NOs. 49 to 57 and SEQ ID NOs. 103 to 122, with additional N-and C-terminal flanking sequences of a corresponding sequence selected from the group consisting of SEQ ID NOs. 1 to 39 and SEQ ID NOs. 58 to 102.
2. (Currently amended) A The MHC class II antigenic peptide of claim 1 comprising
  - (a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 49, or
  - (b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 49 with additional N-and C-terminal flanking sequences of a corresponding sequence selected from the group consisting of SEQ ID NOs. 1 to 3.
3. (Currently amended) A The MHC class II antigenic peptide of claim 1 comprising
  - (a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 103, or
  - (b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 103 with additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ ID NOs. 58 and 59.
4. (Currently amended) A The MHC class II antigenic peptide of claim 1 comprising
  - (a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 104, or
  - (b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 104 with additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ ID NO. 60.

5. (Currently amended) A The MHC class II antigenic peptide of claim 1  
comprising
- (a) the amino acid sequence of the peptide binding motif of SEQ ID NO.105, or  
(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 105 with  
additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ  
ID NO. 61.
6. (Currently amended) A The MHC class II antigenic peptide of claim 1  
comprising
- (a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 106,  
or  
(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 106 with  
additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ  
ID NO. 62.
7. (Currently amended) A The MHC class II antigenic peptide of claim 1  
comprising
- (a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 107, or  
(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 107 with  
additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ  
ID NO. 63.
8. (Currently amended) A The MHC class II antigenic peptide of claim 1  
comprising
- (a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 50, or  
(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 50 with  
additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ  
ID NO. 5.
9. (Currently amended) A The MHC class II antigenic peptide of claim 1  
comprising

(a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 108, or  
(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 108 with additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ ID NOs. 64 to 67.

10. (Currently amended) A The MHC class II antigenic peptide of claim 1 comprising  
(a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 109, or  
(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 109 with additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ ID NO. 68.

11. (Currently amended) A The MHC class II antigenic peptide of claim 1 comprising  
(a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 110, or  
(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 110 with additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ ID NOs. 69 and 70.

12. (Currently amended) A The MHC class II antigenic peptide of claim 1 comprising  
(a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 111, or  
(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 111 with additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ ID NO. 72.

13. (Currently amended) A The MHC class II antigenic peptide of claim 1 comprising  
(a) the amino acid sequence of the peptide binding motif of SEQ ID NO. 112, or

(b) the amino acid sequence of the peptide binding motif of SEQ ID NO. 112 with additional N-and C-terminal flanking sequences of the corresponding sequence of SEQ ID NO. 73.

14. (Previously amended) The MHC class II antigenic peptide of claim 1 linked to a MHC class II molecule.

15. (Previously amended) A purified antibody composition which is selectively reactive to a MHC class II antigenic peptide according to claim 1.

16. (Canceled)

17. (Currently Amended) A host cell containing a recombinant nucleic acid construct comprising the a nucleic acid molecule according to claim 16 operably linked to an expression vector, wherein the nucleic acid molecule encodes a peptide according to claim 1.

18. (Currently amended) A host cell containing tThe nucleic acid construct molecule of according to claim 17.

19-22. (Canceled).

23. (Currently amended) A pharmaceutical composition comprising a MHC class II antigenic peptide according to claim 1 and a pharmaceutically acceptable carrier, wherein the MHC class II antigenic peptide is selected from the peptide(s) of claim 1 or SEQ ID NOs 40 to 48 and SEQ. ID NOs 123 to 141.

24. (Canceled).

25. (Currently amended) A method for diagnosing RA comprising detecting in a patient serum sample the presence of one or more peptides selected from the group consisting of claim 1 or SEQ ID NOs 40 to 48 and SEQ. ID NOs 123 to 141.
26. (Canceled).
27. (Canceled).
28. (Canceled)
29. (Canceled).
30. (Canceled)
31. (Previously presented) A pharmaceutical composition comprising an antibody according to claim 15 and a pharmaceutically acceptable carrier.

**REMARKS**

This Preliminary Amendment supplements the Preliminary Amendment filed on February 7, 2006. In the originally filed Preliminary Amendment of February 7, 2006, claims 1-16, 18, 23, 25 and 28 were amended, claims 19-22, 24, 26-27 and 29 were canceled, and claims 30 and 31 were added. Claims 1-16, 18, 23, 25, 28 and 30-31 thus stand pending prior to this instant Preliminary Amendment.

In accordance with the instant Preliminary Amendment, claims 2-13 have been amended to depend upon claim 1. Claims 17, 18, 23 and 25 have also been amended. Claims 16, 28 and 30 have been canceled. No new matter has been added.

Accordingly, claims 1-15, 17, 18, 23, 25 and 31 as amended are presented for examination. A total of 20 claims thus stand pending prior to examination, of which 6 are independent claims. In Applicants' Transmittal Letter of record (February 7, 2006), Applicants paid for 23 total claims and 6 independent claims. With the instant Preliminary Amendment, there are 6 independent claims. Applicants therefore respectfully submit that there are no additional independent claim fees due.

Applicants have also submitted, by separate paper, the signed oath/declaration of the inventors and the sequence data listing.

Applicants hereby authorize the submission of the \$130 surcharge according to 37 CFR 1.492(h). No further fee is believed to be required in connection the filing of this Amendment. However, if any additional fees are deemed necessary, authorization is given to charge the amount of any such fee to Deposit Account No. 08-2525.

Respectfully submitted,

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